

What is claimed is:

Sub B¹ 1. A hub assembly for a catheter tube having a lumen therethrough, the hub assembly comprising:

a hub portion having a proximal end and a distal end, and including an integral connection disposed at the proximal end, and a lumen defined therethrough extending from the proximal end to the distal end; and

a strain relief having a proximal end and a distal end, the strain relief being disposed at the distal end of the hub portion and the proximal end of the strain relief being integrally connected to the distal end of the hub portion, the strain relief defining a passage configured to receive the catheter tube such that the lumen through the hub portion is in fluid communication with the catheter lumen.

2. A hub assembly in accordance with claim 1, wherein the lumen extending through the hub portion has a wall having an average wall thickness and the strain relief passage has a wall having an average wall thickness, and the average wall thickness of the hub portion is greater than the average wall thickness of the strain relief passage.

3. A hub assembly in accordance with claim 2, wherein the wall thickness of the passage generally decreases from the strain relief proximal end to the strain relief distal end.

4. A hub assembly in accordance with claim 3, wherein a plurality of grooves extend into the passage wall generally transversely toward the passage.

5. A hub assembly in accordance with claim 4, wherein the grooves extend through the wall into the passage.

6. A hub assembly in accordance with claim 4, wherein the grooves are disposed in a plurality of sets, each set including two grooves, the two grooves within each set being disposed generally within the same plane to define a transverse hinge in the strain relief.

7. A hub assembly in accordance with claim 3, wherein the strain relief includes a generally helical portion extending from proximate the proximal of the strain relief to proximate the distal end of the strain relief.

8. A hub assembly in accordance with claim 1, wherein the connector is a threaded connector.

9. A hub assembly in accordance with claim 1, wherein the hub portion includes transversely extending wings.

10. A hub assembly in accordance with claim 1, wherein the hub portion and the strain relief portion comprise the same material.

11. A hub assembly in accordance with claim 10, wherein the material comprises nylon.

12. A hub assembly in accordance with claim 10, wherein the material comprises PEBA.

13. A hub assembly in accordance with claim 10, wherein the material comprises polycarbonate.

14. A hub assembly in accordance with claim 1, further comprising:

an angled port integrally connected to, and extending from, the hub portion.

15. A hub assembly for a catheter tube having a lumen therethrough, the hub assembly comprising:

a hub portion having a proximal end and a distal end, and including an integral connection disposed at the proximal end, and a lumen defined therethrough extending from the proximal end to the distal end; and

a strain relief having a proximal end and a distal end, the strain relief being disposed at the distal end of the hub

portion and the proximal end of the strain relief being integrally connected to the distal end of the hub portion, the strain relief being more flexible than the hub portion, the strain relief defining a passage including a wall, the passage configured to receive the catheter tube such that the lumen through the hub portion is in fluid communication with the catheter lumen.

16. A hub assembly in accordance with claim 15, wherein a plurality of grooves extend into the passage wall generally transversely toward the passage.

17. A hub assembly in accordance with claim 16, wherein the grooves extend through the wall into the passage.

18. A hub assembly in accordance with claim 16, wherein the grooves are disposed in a plurality of sets, each set including two grooves, the two grooves within each set being disposed generally within the same plane to define a transverse hinge in the strain relief.

19. A hub assembly in accordance with claim 15, wherein the strain relief includes a generally helical portion extending from proximate the proximal end of the strain relief to proximate the distal end of the strain relief.

20. A hub assembly in accordance with claim 15, wherein the connector is a threaded connector.

21. A hub assembly in accordance with claim 15, wherein the hub portion includes transversely extending wings.

22. A hub assembly in accordance with claim 15, wherein the hub portion and the strain relief portion comprise the same material.

23. A hub assembly in accordance with claim 22, wherein the material comprises nylon.

24. A hub assembly in accordance with claim 22, wherein the material comprises PEBA.

25. A hub assembly in accordance with claim 22, wherein the material comprises polycarbonate.

26. A hub assembly in accordance with claim 15, further comprising:

an angled port integrally connected to, and extending from, the hub portion.